NOTES AND ABSTRACTS

RESIGNATION OF THE ASSISTANT EDITOR

Dr. B. M. Varney is terminating his connection with the MONTHLY WEATHER REVIEW as of May 14 in order to go to an associate professorship at the University of California at Los Angeles.

W. W. REED ON CLIMATOLOGICAL DATA FOR THE TROPICAL ISLANDS OF THE PACIFIC[1]

This SUPPLEMENT, as its title indicates, presents statistics of temperature, precipitation, relative humidity, cloudiness, and prevailing winds for the single islands and groups of islands of the Pacific.

The data are presented mostly in the form of monthly and annual means and extremes. Monthly and annual totals of precipitation also are given for a group of selected stations at each of which the record covers a period ranging from 20 to 40 years. The statistics have been compiled from existing publications and assembled under a single cover for easy reference.

The author has completed his task in a very satisfactory manner. Copies of the SUPPLEMENT may be obtained from the Superintendent of Documents, Washington, D. C., at the price of 10 cents each. Remittances should be sent direct to that official.—*A. J. H.*

AEROLOGICAL SOUNDINGS BY AIRPLANE IN RELATION TO THE BJERKNES THEORY OF CYCLONES

The final section of a paper under the above title by the Director of the Belgian Meteorological Institute presents the results of three airplane soundings over Belgium. We print a translation of M. Jaumotte's conclusions:

The few cases we have analyzed in this study show perfect agreement between facts and the Bjerknes theory. The cases of the degenerated cyclones prove that the separation of warm and cold air masses persists for a very long time, and that consequently the phenomenon of mixing has but a negligible importance. This is an important argument for the Norwegian school against that of Exner. It is recognized that the two schools have the same point of departure, viz, the juxtaposition of two air masses of different temperatures, considered by Margules as the source of the potential energy which the cyclone partly transforms into kinetic energy. According to Bjerknes the end result is a superposition of the tropical air over the polar; while according to Exner the cyclone brings about a complete mixing of the two masses.

The airplane soundings seem definitely to have settled the question.

But not all the difficulties have been resolved. It is certain that the systematic use of the airplane for exploring the atmosphere will in future make a contribution of the highest importance to the study of the problems which confront us. One may criticize the method at present as being limited by altitude, but on the other hand it possesses the enormous advantage over the *ballon sonde* of not being blind.

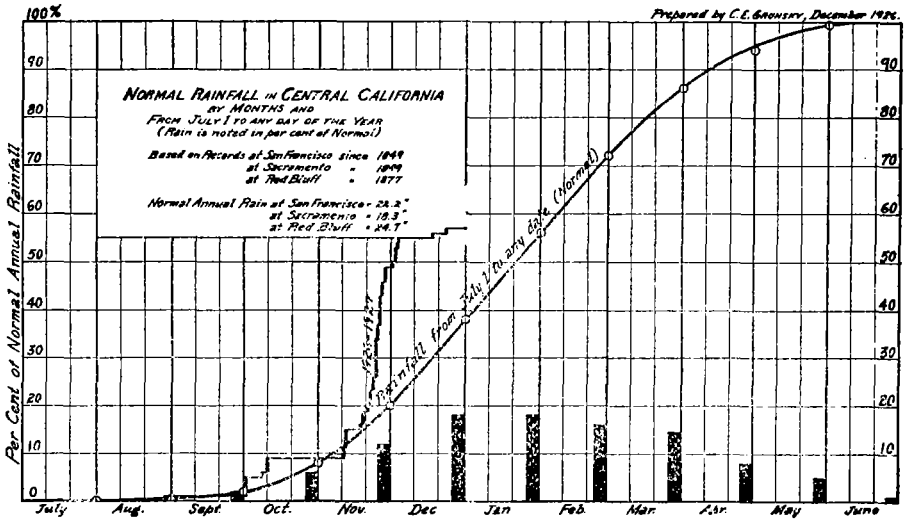
In order to reach its full usefulness, sounding by airplane ought to be carried out by a pilot with a conscientious observer who will carefully note the phenomena observed. It is likewise necessary that the meteorograph be very accurate, and especially that the thermometer record the changes of temperature without lag. It goes without saying that, except in very strongly marked cases, a discontinuity will not be shown if the trace is thickened by vibrations.—*Transl. B. M. V.*

THE SEASONAL RAINFALL TO ANY DATE

By C. E. GRUNSKY

[San Francisco, Calif., January 1, 1927]

A diagram prepared for use in central portions of California as an aid to a quick and dependable determination of the normal rainfall to any day of the climatic year has been found very helpful in making comparison of any season's precipitation with normal.



How such a comparison can be made is shown on the diagram herewith presented. To the base diagram there has been added the mass curve of rainfall for the season 1926–27 from July 1 to December 31 which shows that rainfall at that time for the season 1926–27 was about 57 per cent of the normal annual rainfall, which amount is to be compared with 38 per cent of the normal annual, shown by the curve to be the normal to that date.

When the mass curve of rainfall for individual years is to be plotted on such a base diagram sufficient space above the 100 per cent line should be provided so that there will be room for the possible extreme annual. This in the case of California is somewhat in excess of 200 per cent.

As noted on the diagram the precipitation records at three stations—San Francisco, Sacramento, and Red Bluff—have been used in its preparation and the results apply to any point within an extensive region instead of to the three single stations alone. The normal monthly rainfall, always in percentage of the normal annual, is shown for each month in black. Each of these values is

[1] MONTHLY WEATHER REVIEW SUPPLEMENT No. 28, W. W. Reed,